Problem 6) You have a random sample of size 51 from a normally distributed population with variance of 13 and unknown mean. We will test the null hypothesis that μ = -8 against the alternative that μ ≠ -8.

Find a rejection region so that α = 0.05.

Find the power of the test, as a function of μ. Find β(μ).

If the outcome of the sample mean is -12, will you reject H0? What if it is 0?